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BRACHIOPODA

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E. F. OWEN

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1.—TITLES

NOTE.—The system of numbering all papers in each part of the Zoological Record has now been dropped. In this part numbers are only given (in parentheses) to papers in excess of one by a particular author.

The year of publication is omitted where it is the same as the volume year of the "Record", namely (1957).

Adams, P. J. *see* Cowie, J. W.

Ager, D. V. The true *Rhynchonella*. Palaeontology **1** 1 : 1–15 2 pls. 4 text-figs.

Ager, D. V. (**1**). Some new Liassic terebratuloids. Proc. Geol. Assoc. **67** : 1–14 1 pl. 4 text-figs.

Ager, D. V. (**2**). Proposed determination under the plenary powers of the interpretation of the nominal species "Rhynchonella subconcinna" Davidson, 1852 (Phylum Brachiopoda, Class Articulata). Bull. zool. Nomencl. **13** : 254–256.

Ager, D. V. (**3**). Proposed determination under the plenary powers of the interpretation of the nominal species "Terebratula lineata" Young & Bird, 1828 (Phylum Brachiopoda, Class Articulata). Bull. zool. Nomencl. **13** : 251–253.

[**Aisenberg,** D. E. & **Brazhnikova,** N. E.] [On the correlation of the Lower Carboniferous of the Donetz Basin and other regions of the Russian Platform]. C.R. Acad. Sci. U.R.S.S. **115** 3 : 589–592 (brachiopods mentioned).

Alastrue, E. & others. Explicacion al mapa geologico de la Provincia de Huesca. Inst. geol. Min. Espana : 1–253, 2 pls., illust. (brachiopods listed).

Alberti, G. Zum Unter- und Mitteldevon Ostthüringens. Ber. geol. Ges. **2** : 199–202.

[**Aliev,** R. A.] [Brachiopods from Cretaceous deposits between the rivers Tagirdzhalchaï — Gilgilchaï (South-Eastern Caucasus)]. Bull. Acad. Sci. Azerb. S.S.R. **11** : 37–52 1 pl.

Amos, A. J. New syringothyrid brachiopods from Mendoza, Argentina. J. Paleont. **31** : 99–104 1 pl. 3 text-figs.

Amsden, T. W. Catalog of Fossils from the Middle and Upper Ordovician of Oklahoma. Circ. Okla. geol. Surv. **43** : 1–41 (brachiopods listed).

[**Andronov,** S. M.] [Stratigraphic importance of *Gypidula galeata* Dalman]. C.R. Acad. Sci. U.R.S.S. **105**, 5, 1955 : 1060–1061.

Aronova, S. M. *see* Filippova, M. F.

Aygen, T. Balya Bölgesi Geoljisinin Incelenmesi. Min. Res. Inst. Turkey D **11** 1956 : 1–95 pls. (brachiopods listed).

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Baker, A. A. *see* Gill, E. D.

Beerbower, J. R. Paleoecology of the Centerfield coral zone East Stroudburg locality, Mouroe County, Pennsylvania. Proc. Pa. Acad. Sci. **31** : 91–97, 1 fig. (brachiopods listed).

Biernat, G. On *Peregrinella multicarinata* (Lamarck) (Brachiopoda). Acta Palaeont. polon. **2** : 19–50 8 pls. 8 text-figs. [with Polish and Russian abstracts].

Bierther, W. Zur Stratigraphie der Stromberger Mulde und ihre Bedeutung für den südlichen Hunsrück. Decheniana **108** 1 : 45–54 (brachiopods listed).

Biese, W. A. Der Jura von Cerritos Bayos–Calama Republica de Chile, Provinz Antofagasta. Geol. Jb. **72** : 439–495 6 pls. 2 tables (brachiopods mentioned).

[**Blokh,** A. M.] [On the distribution of the Mid-Carboniferous in the South-East of the sub-Moscow basin]. Bull. Acad. Sci. U.R.S.S. **2** 1956 : 101–104 3 figs. [in Russian] (brachiopods mentioned).

[**Bludorov,** A. P. & **Turzova,** L. S.] [Coal-measures of the Lower Carboniferous of Tartary]. C.R. Acad. Sci. U.R.S.S. **111** 1956 : 663–666 (brachiopods mentioned).

[**Bogush,** O. I. & **Tufrev,** O. V.] [Foraminifera and the stratigraphy of the coal deposits of Kara-Tau and the Western parts of the Talass Ala-Tau]. C.R. Acad. Sci. U.R.S.S. **112** : 487–489 (brachiopods mentioned).

Boucot, A. J. Revision of some Silurian and early Devonian Spiriferid genera and erection of Kozlowskiellinae, new subfamily. Senckenbergiana Leth. **38** 5–6 : 311–334 3 pls. 3 figs.

Bowsher, A. L. & **Dutro,** J. T. The Paleozoic section in the Shainin Lake area, Central Brooks Range, Alaska. Prof. Pap. U.S. geol. Surv. **303**-A : pp. 1–39 (brachiopods mentioned).

Brazhnikova, N. E. *see* Aisenburg, D. E.

Cailleux, A. *see* Chavan, A.

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Cooper, G. A. Brachiopods *in* Ladd, H. S. Treatise on ecology and paleoecology vol. 2. Mem. geol. Soc. Amer. No. **67** 801–804.

Cooper, G. A. (**1**). Brachiopods *in* Hedgpeth, J. W. Treatise on marine ecology and paleoecology vol. 1. Mem. geol. Soc. Amer. **67** : 1113–1116.

Cooper, G. A. (**2**). Permian brachiopods from central Oregon. Smithson. Misc. Coll. **134** 12 : 1–79, 12 pls.

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Cooper, G. A. (**4**). Tertiary and Pleistocene Brachiopods of Okinawa, Ryukyu Islands. Prof. Pap. U.S. geol. Surv. **314**-A : 1–20 5 pls.

Cooper, G. A. (**5**). Loop development of the Pennsylvanian terebratulid *Gryptacanthia*. Smithson. misc. Coll. **134** 3 : 1–18 2 pls. 12 figs.

Coleman, P. J. Permian Productacea of Western Australia. Bull. Bur. Min. Res. geol. **40** : 1–188 21 pls. figs.

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Dalmatskaya, I. I. *see* Semikhatova, S. V. & Elina, L. M.

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Efremova, L. N. *see* Postnikova, I. E. & Liashenko, A. I.

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Farag, I. A. M. **(1).** Quatre espèces nouvelles du genre *Terebratula* dans les roches jurassiques du Massif du Moghara, Sinai du Nord. Egypt. J. Geol. **1** No. 2 : 127–132 1 pl.

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[**Licharev**, B. K.] [Some notes on some Carboniferous Spirifers from Kazan]. Ann. Soc. paléont. russe **16** : 128–133.

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[**Postnikova,** I. E., **Liashenko,** A. I. & **Efremova,** L. N.] [The stratigraphy of Middle Devonian beds in the Shkapov oil deposits]. C.R. Acad. Sci. U.R.S.S. **117** 2 : 275–278 (brachiopods mentioned).

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II.—SUBJECT INDEX

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GENERAL

Handbooks.—General handbook & guide, **Rutte.**

Classification and Nomenclature.—Revision of type species of *Rhynchonella* s.s., **Ager;** L^{r}. Jursssic, England, **Ager (2); & (3);** Classification of Triassic ribbed rhynchonellids, **Tokuyama (2).**

STRUCTURE

Notes on cardinalia of spiriferoids, **Licharev;** Structure of spines in *Productella*, **Goldring;** Structure of syrinx, shell structure, **Amos;** Shell structure '*Unispirifer*', **Campbell;** Accessory brachial structures in long-looped terebratuloids, **Elliott;** Reconstr. interior brachial valve *Z. elliotti*, **Ager (1);** Vascular systems, musculature and cardinalia of Strophomenoidea, **Spjeldnaes;** "shell-mosaic" in *Rhynchonella* s.s., **Ager;** Shell structure, Recent, **Revelle & Fairbridge.**

Serial sections.—L^{r}. Carboniferou·., Australia, **Campbell ;** L^{r}. Carb. U.S.S.R., **Licharev (1);** U^{r}. Devonian, Belgium, **Vandercammen; Sartenaer;** L^{r}. Carb. U.S.S.R., **Vasilyeva & Payarkov;** U^{r}. Devonian–L^{r}. Carboniferous, Western Australia, **Glenister;** Mid. Ordovician, Norway, **Spjeldnaes;** Liassic Terebratuloids, England, **Ager (1);** U^{r}. Triassic spiriferoids, Japan, **Tokuyama;** U^{r}. Jurassic, Russia, **Ager;** U^{r}. Jurassic, Japan, **Tokuyama;** L^{r}. Cretaceous, France and Poland, **Biernat.**

EVOLUTION

Origin of Terebratellacea, **Elliott (1);** Evolutionary rates compared with those of mammals and Pamellibranchs, **Williams;** Phylogeny of *Cyrtospirifer* in Catskill Delta, **Greiner;** Phylogeny of some Orthotetacea, **Campbell.**

Biometrics.—Devonian spiriferoids, Belgium, **Tonnard;** Australian spiriferoids, **Campbell;** L^{r}. Carboniferous spiriferoids, Belgium, **Vandercammen;** Middle Ordovician strophomenoids, Norway, **Spjeldnaes.**

ECOLOGY

Palaeoecology of U^{r}. Devonian and L^{r}. Carboniferous spiriferoids, **Greiner;** Cambrian brachs., Brachiopod 'meadows' and reefs, **Lochman;** Mid. Devonian, U.S.A., **Cooper (3);** Recent—no parasitic brachiopods, **Hopkins.**

Geographical distribution. — Permian, **Stehli**; L^r. & Mid. Jurassic, **Smith (1)**; U^r. Cretaceous, **Smith (1)**; Mid. Devonian, U.S.A., **Cooper (3)**; L^r. Lias, **Ager (1)**; Middle Ordovician, **Spjeldnaes**.

DEVELOPMENT

Dimorphism in Palaeozoic species, **Stepanov**; Diagenetic changes in shell fragments, **Moretti**; Development, Nepionic stage in Productidae, **Goldring**; Development *Peregrinella*, **Biernat**.

DISTRIBUTION

Fossil

Cambrian.—Greenland, **Cowie & Adams**; U.S.A., Montana and Wyoming, **Lochman**; (Mid.) Vermont, **Shaw**; Maryland, **Vokes**; (U^r.) Colorado, **Rhodes & Fisher**.

Ordovician.—Greenland, **Cowie & Adams**; (Mid.) Oslo, Norway, **Spjeldnaes**; U.S.S.R., **Komar**; U.S.A., Montana and Wyoming, **Ross**; (L^r.) **Sando**; (Mid. & U^r.) U.S.A., **Amsden**.

Silurian.—(L^r.) Gt. Britain, **Boucot**; Poland, **Tomczyk**; U.S.S.R., **Zavidova**; Vilyi River, U.S.S.R., **Komar**; U.S.S.R., **Andronov**; (U^r.), Moldavia, **Edelshtein**; U.S.A., **Ehlers & Wright**; New York, **Fisher**; Western Australia, **Glenister** (B. F. & A. T.).

Devonian.—(U^r.), Belgium, **Sartenaer (1), (2) & (3)**; (U^r.), **Vandercammen**; (Frasnian), Belgium, **Tonnard**; (U^r.), Germany, **Goldring**; (Mid.) Germany, **Knipping**; (Mid.) Germany (Eifel), **Struve**; (L^r. & Mid.) Germany, **Alberti**; **Bierther**; Poland, **Pajchlowa**; **Czarnocki**; U.S.S.R., **Nalivkin**; U.S.S.R., **Filippova & Aronova**; Shkapov, U.S.S.R., **Postnikova, Liashenko & Efrenova**; (Mid. and U^r.) U.S.S.R., **Lyashenko**; (U^r.) Tien-Shan, **Vasilyeva & Poyarkov**; (Mid.) U.S.S.R., **Krivtov**; U.S.S.R., **Levenko**; (Mid.) **Tumanov & Liashenko**; (U^r.) Alaska, **Bowsher & Dutro**; (Mid.) Canada, **Ehlers & Wright (1)**; (L^r.) U.S.A., **Boucot**; (U^r.) U.S.A., **Greiner**; (U^r.) Arizona, **Sabins**; Idaho and Montana, **Scholten**; (U^r.) Pennsylvania, **Beerbower**; (Mid.) U.S.A., **Stumm**; (Mid.) Nevada, **Johnson & Hibberd**; (Mid.) E. and Central U.S.A., **Cooper (3)**; (Mid. and U^r.) Morocco, **Drot**; Southern Hemisphere, **Leanza (1)**; (U^r.) Western Australia, **Glenister**; (L^r.) Australia, **Boucot**.

Carboniferous. — (L^r.) Northern England, **Amos**; (L^r. and U^r.) England, **Eden, Stevenson & Edwards**; (U^r.) Lancashire, **Eager & Ramsbottom**; (L^r.) England, **Parkinson**; (L^r.) England, **Reading**; (L^r.) Ireland, **George**; (U^r.) Yorks. Westmorland, **Rowell & Scanlon**; (L^r.) Spain, **Delapine & Llopis Llado**; (L^r.) Germany, **Hoth**; (L^r.) Poland, **Pistrak, Semikhatova, Pashkevich & Vereiskaya**; (L^r.) Central Kazakhstan, **Padve & Sokolova**; (L^r.) U.S.S.R., **Graizer**; (Mid. and U^r.) U.S.S.R., **Ivanova**; (L^r.) U.S.S.R., **Bludorov & Tuzova**; River Shartim, U.S.S.R., **Sultanaev**; (L^r.) Urals, U.S.S.R., **Guseva**; (L^r.) Central Urals, **Einor**; (L^r.) Tien-Shan, U.S.S.R., **Vasilyeva & Poyarkov**; (L^r.) U.S.S.R., **Licharev**; (Mid.) U.S.S.R., **Blokh**; (L^r.) U.S.S.R., **Licharew (1)**; (Mid. and U^r.) U.S.S.R. **Volgin**; and **Volgin (1)**; (L^r.) U.S.S.R., **Rotai**; (L^r.) U.S.S.R., **Librovitch**; (L^r.) Kara-Tau and Talass Ala-Tau U.S.S.R., **Bogush & Tufrev**; Russian Platform, **Aisenberg & Brashnikova**; (L^r.) Russia, **Semikhatova, Elina & Dalmatskaya**; (L^r.) **Zekkel**, Russia, (U^r.) U.S.S.R., **Marinov & Khubuldicov**; (L^r.) U.S.S.R., **Semikhatova, Rizhova & Rostoutzeva**; (L^r.) U.S.S.R., **Sultanaev & Shlikova**; (L^r.) Alaska, **Bowsher & Dutro**; (L^r. amd U^r.) Nevada, U.S.A., **Johnson & Hibbard**; (L^r.) U.S.A., **Greiner**; (U^r.) **Cooper (5)**; (L^r.) U.S.A., **Scholten**; (L^r.) U.S.A. **Vokes**; (U^r.) New Mexico, U.S.A., **Muehlberger**; (U^r.) Iowa, U.S.A., **Moretti**; (L^r.) U.S.A., **Elias**; (U^r. Pennsylvanian) Kansas, **Miller & Swineford**; (U^r.) Illinois, **Weller**; (U^r.) Kansas, **Tasch**; (L^r.) Brazil, **Mendes**; (L^r.) Argentina, **Amos**; (L^r.) Argentina, **Leanza**; (L^r.) Sahara, **Delapine**; (L^r.) Australia, **Campbell**; (L^r.) Australia, **Glenister**.

Permian.—World wide, **Stehli**; Turkey, **Aygen**; U.S.S.R., **Mironova & Stepanov**; U.S.S.R., **Ravikovich**; (L^r.) U.S.S.R., **Volgin (1)**; Arizona,

U.S.A., **Sabins**; (Mid. Oregon, U.S.A., **Cooper (2)**; California, **Merriam & Hall**; South Tunisia, **Termier & Termier**; New Zealand, **Fletcher**; Western Australia, **Coleman**; Western Australia, **Dickens & Thomas**.

Trias. — Austria, **Plochinger**; Russia, **Tuchkov**; (U^r.) Japan, **Tokuyama (1)** & **(2)**; New Zealand, **Marwick**.

Jurassic.—(L^r.) General, **Elliott**; (L^r. Lias) Yorkshire, **Howarth**; (L^r. and U^r.) England, **Ager**; Lias, England, **Ager (1)**; (Mid.) Somerset, England, **Sylvester-Bradley & Hodson**; (Mid.) Bath, England, **Sylvester-Bradley**; (Mid.) Dorset, **Fowler**; Greenland, **Donovan**; (L^r.) Italy, **Cuzzi**; Yugoslavia, **Danilova, Antonijevic & Trajkovic**; Black Sea, **Sukharevich**; Russia, **Tuchkov**; Chile, **Biese**; Egypt, **Farag**; Japan, **Tokuyama**.

Cretaceous.—(U^r.) Hertfordshire, England, **Perry**; (U^r.) Devon, **Smith**; (U^r.) England, **Smith (1)**; (L^r.) France, **Rosset**; (L^r.) France, **Biernat**; (L^r.) Germany, **Haller**; (L^r.) Poland, **Biernat**; Greenland, **Donovan**; (L^r.) Georgia, U.S.S.R., **Popkhadze**; U.S.S.R., **Aliev**; (L^r.) **Kokoszyńska**.

Tertiary.—Australia, **Gill & Baker**.

Palaeogene.—Hungary, **Szöts**.

Neogene.—Alaska, **MacNeil**; Okinawa, Pacific, **Cooper (4)**.

Oligocene. — (U^r.) Germany, **Hubach**.

Miocene. — Maryland, U.S.A., **Vokes (1)**.

Pliocene.—Italy, **Malaroda**; Japan, **Kotoh**.

Bibliographic.—Bibliography of M. A. Stainbrook, **Trowbridge**; Palaeoecology, **Cooper**; ecology of modern genera, **Cooper (1)**.

III.—SYSTEMATIC INDEX

NOTE.—The classification used here is according to H.M. Muir-Wood, 1955, with minor later amendments. In view of the very varied state of revision of the different groups and to avoid certain inconsistencies, no subdivision is attempted here below the level of superfamilies.

Generic and family names are arranged in alphabetical order within each superfamily.

Reference to the "Titles" is by the name(s) of the Author(s).

CLASS INARTICULATA

Order ATREMATA

†OBOLACEA

Obulus ? conveyus **sp. nov.** p. 112, figd. Lower Ordovician, U.S.A. **Sando**.

Obolus sp. p. 2513 figd. Upper Cambrian or ?L^r. Ordovician, U.S.A. **Rhodes & Fisher**.

LINGULACEA

†*Lingula allingi* **sp. nov.** p. 25, figd. U^r. Silurian, N. York, U.S.A. **Fisher**; *bicarinata*, *subparallela* p. 64, figd. **Nalivkin**; sp. p. 20, figd. Permunian, U.S.A. **Cooper (2)**; sp. cf. *L. paracletus* p. 487 figd. **Elias**.

Order NEOTREMATA

DISCINACEA

†*Discinisca lugubris* p. 6, figd. Miocene, Maryland, **Vokes (1)**.

†*Orbiculoidea daleidensis* p. 200, **Alberti**.

CRANIACEA

†*Crania minuta* **sp. nov.** p. 488 figd. L^r Carboniferous Oklahoma **Elias**; *proavia* p. 65, figd. **Nalivkin**.

CLASS ARTICULATA

†Suborder ORTHOIDEA

ORTHACEA

Dinorthis (*Pionorthis* (?)) cf. *D.* (*P.*) *occidentalis* Okulitch p. 475 figd. **Ross**.

Dinorthis (*Plaesiomys* (?)) cf. *D.* (*P.*) *occidentalis* Ladd p. 475 figd. **Ross**.

Dinorthis cf. *transversa* p. 194 figd. **Vokes**.

Diparelasma marylandicum, subquadratum **spp. nov.** p. 115, figd. L^r. Ordovician, U.S.A. **Sando.**

Finkelnburgia bridgei, stonehengensis **spp. nov.** p. 113, *virginica* p. 114 all figd. L^r. Ordovician, U.S.A. **Sando;** *virginica* p. 194 figd. **Vokes.**

" *Finkelnburgia* " sp. p. 787 figd. **Shaw.**

Hesperorthis cf. *H. laurentina* p. 475 figd. **Ross.**

Nisusia festinata, cloudi **sp. nov.**, *N.*(?) *howelli* **sp. nov.** all p. 786 all figd. Mid. Cambrian Vernont. **Shaw.**

Platystrophia cf. *P. equiconvexa* p. 476 **Ross.**

†Suborder DALMANELLOIDEA

DALMANELLACEA

Aulacella interlineata, eifeliensis p. 65 figd. **Nalivkin.**

Diceromyonia genus discussed p. 486, **D. sp. nov.**, *storeya, D.* cf. *D. ignata* p. 487 all figd. **Ross.**

Enteletes waageni, contractus E. sp., p. 198 figd. **Termier & Termier.**

Enteletinae: geographical distribution discussed. **Stehli.**

Parmorthis elegantula p. 195 figd. **Vokes.**

Rhipidomella musculosa p. 195 figd. **Vokes;** sp. 1 p. 21 figd. Permian, U.S.A. **Cooper (2);** discussed p. 51, *australis* p. 52, *myosa* **sp. nov.** p. 54 both figd. **Campbell.**

Schizophoria resupinata p. 89, figd. **Rotai;** *tulliensis, ivanovi, striatula* p. 66, figd. **Nalivkin;** discussed p. 47, *S.* cf. *S. resupinata* p. 48 figd. **Campbell.**

Tropidoleptus carinatus p. 196 figd. **Vokes.**

†Suborder CLITAMBONITOIDEA

CLITAMBONITACEA

Polytoechia ? septata **sp. nov.** p. 116 figd. L^r Ordovician, U.S.A. **Sando.**

Tritoechia alticostellata, curvirostris, p. 118, *tubulata* p. 119 **spp. nov.**, *T.* cf. *tubulata* p. 120 all figd. L^r. Ordovician, U.S.A. **Sando.**

†Suborder SYNTROPHIOIDEA

SYNTROPHIACEA

Diaphelasma pennsylvanicum p. 124 figd. **Sando.**

Doloresella **gen. nov.** p. 122, type species *D. concentrica* **sp. nov.** p. 123 figd. L^r. Ordovician, U.S.A. **Sando.**

Plectotrophia globosa **sp. nov.** p. 121 figd. L^r. Ordovician, U.S.A. **Sando.**

Porambonties (*Isorhynchus*) *schmidti* p. 223, cf. *baueri* p. 224, both figd. *P.* (*Isorhynchus*) sp. p. 225. **Spjeldnaes (1).**

Porambonites (*Porambonites*) *kjerulfi* **sp. nov.** p. 221 figd. Middle Ordovician, Norway. **Spjeldnaes (1).**

Stichotrophia sp. p. 126. **Sando.**

Syntrophinella acutisulcata p. 124, *cooperi* p. 125, **Spp. nov.** figd. L^r. Ordovician, U.S.A. **Sando.**

Syntrophopsis cf. *minor* p. 126 figd. **Sando.**

Tetralobula tenuimusculata **sp. nov.** p. 122 figd. L^r. Ordovician, U.S.A. **Sando.**

Xenelasma syntrophioides p. 127 figd. **Sando.**

†Suborder PENTAMEROIDEA

PENTAMRRACEA

Barrandella sublinguifera p. 82, figd. **Nalivkin.**

Conchiduim bashkiricum, pseudobaskiricum, tenuicostatum p. 81, all figd. **Nalivkin.**

Gypidula coeymanensis p. 195 figd. **Vokes;** *ivdelensis* p. 83, *biplicata, multiplicata, askynica, brevirostris* p. 84, *globa* p. 85, all figd. **Nalivkin.**

Pentamerella pavilionensis p. 82, figd. **Nalivkin.**

Pentamerus ex. gr. *globus* p. 153 figd. **Firtion.**

Sieberella sieberi p. 83, figd. **Nalivkin.**

Suborder STROPHOMENOIDEA

†PLECTAMBONITACEA

Alwynella **gen. nov.** p. 85, type species *A. osloensis* **sp. nov.** p 86,

intermedia p. 87, *ildjernensis* p. 88. **spp. nov.** figd. Middle Ordovician, Norway. **Spjeldnaes.**

Chonetoidea gamma p. 106, *alpha* p. 107, *stoermeri* p. 108. **spp. nov.** all figd. Middle Ordovician, Norway, **Spjeldnaes.**

Diambonia (?) *leifi* p. 79, *anatoli* p. 80 **spp. nov.** figd. Middle Ordovician, Norway. **Spjeldnaes.**

Eoplectodonta acuminata p. 96, *karina* **sp. nov.** p. 100, *E.* (?) *percedens* p.101, *rhombica* p. 103. all figd. Middle Ordovician, Norway. **Spjeldnaes.**

Grorudia **gen. nov.** p. 61, type species *G. grorudi* **sp. nov.** p. 62, (?) *glabrata* **sp. nov.** p. 63 both figd. Middle Ordovician, Norway. **Spjeldnaes.**

Leangella hamari **sp. nov.** p. 181 figd. Upper Ordovician, Norway. **Spjeldnaes.**

Leptelloidea (*Benignites* ?) *heintzi* **sp. nov.** p. 74 figd. Middle Ordovician, Norway. **Spjeldnaes.**

Leptelloidea p. 66 genus discussed. **Spjeldnaes.**

" *Leptelloidea* " *rosendahli* **sp. nov.** p. 75, " *L* ". sp. p. 76 both figd. Middle Ordovician, Norway. **Spjeldnaes.**

Leptestia aff. *jukesi* p. 65 figd. **Spjeldnaes.**

Palaeostrophomena (?) *majori* **sp. nov.** p. 64 figd. Middle Ordovician, Norway. **Spjeldnaes.**

Plectodonta minor p. 563 figd. Middle Devonian, Marocco, **Drot.**

Ptychoglyptus valdari **sp. nov.** p. 58 figd. Middle Ordovician, Norway. **Spjeldnaes.**

Sampo (*sampo*) *indentata* **sp. nov.** p. 69 figd. Middle Ordovician, Norway. **Spjeldnaes.**

Sampo (*Leptellina*) *oepiki* p. 71, *elevata* **sp. nov.** p. 73 both figd. Middle Ordovician, Norway. **Spjeldnaes.**

Sowerbyella minor p. 200. **Alberti.**

sericea soudleyensis p. 89, *sericea askerensis* p. 92, *sericea hedelandica*, p. 93 **subspp. nov.**, *ringsakerensis* **sp. nov.** p. 94, all figd. *S.*(?) sp. p. 95. Middle Ordovician, Norway. **Spjeldnaes.**

†*Thaerodonta* genus discussed p. 480, *T.* cf. *T. recedens* p. 481 figd. **Ross.**

†STROPHOMENACEA

Christiania holtedahli **nom. nov.** for *C. tenuicincta* (McCoy) figd. Holtedahl 1916., cf. *holtedahli* p. 122 [**sp. nov.**], *oblonga* p. 122, cf. *oblonga* p. 125, *elongata* **sp. nov.** p. 126, Middle Ordovician, Norway. **Spjeldneas.**

Douvillina cayuta p. 196, figd. **Vokes.**

Gunnarella **subgen. nov.** p. 149, type species *Strophomena* (*Gunnarella*) *delta* **sp. nov.** p. 150, *beta*, p. 151, *alpha* p. 152 **spp. nov.** cf. *rigida* p. 153, all figd. Middle Ordovician, Norway. **Spjeldnaes.**

Holtedahlina cf. *H. sulcata H.* cf. *H. moniquensis* p. 486, both figd. **Ross.**

Irboskites fixatus p. 80, figd. **Nalivkin.**

Kiaeromena **gen, nov.** p. 183, type species *Leptaena kjerulfi* Holtedahl 1916, p. 185, cf. *juvenilis* p. 188 all figd. Middle Ordovician, Norway. **Spjeldnaes.**

Kjerulfina foliovalve p. 154, *limbata* p. 156, *lata* p. 159 **spp. nov.**, *broeggeri* p. 158. *K.* (?) sp. p. 160 all figd. Middle Ordovician, Norway. **Spjeldnaes.**

Leptaena rhomboidalis p. 68, figd. **Nalivkin;** *rugosa* p. 173, (?) *indigena* p. 174, *strandi* p. 176, *ennessbe* p. 177, *veldrensis* p. 179, **spp. nov.** figd., *minuta* p. 180, *L.* sp. p. 182 figd., cf. *minuta* p. 182. Middle Ordovician, Norway. **Spjeldnaes.**

Leptaenella (footnote: objective synonym of *Leptagonia*) p. 40, *L.* cf. *L. analoga* p. 41 figd. **Campbell.**

Leptagonia see *Leptaenella.*

†*Megamyonia* cf. *M. unicostata* p. 483, *M.* cf. *M. ceres*, cf. *M. ritens.* aff. *M. ritens* p. 484, *M.* sp. p. 485, all figd. **Ross.**

Mjoesina **gen. nov.** type species *Rafinesquina mjoesensis* Holtedahl 1916, p. 137 figd., cf. *mjoesensis* p. 139, *gregaria* **sp. nov.** p. 139 figd. Middle Ordovician, Norway, **Spjeldnaes.**

Öepikina dorsata media p. 169, *Ö.* (? or *Rafinesquina*) sp. p. 170 both figd. **Spjeldnaes;** genus discussed, *Ö.* ? aff. *Ö. limbrata* p. 485 figd. **Ross.**

Oslomena **gen. nov.** type species *O. osloensis* **sp. nov.** p. 161, aff. *girvanensis* p. 167 all figd., ? *O. celtica* p. 167, *O.* (?) *papillio* **sp. nov.** p. 168 figd. Middle Ordovician, Norway. **Spjeldnaes.**

Pholidostrophia lepis p. 71, figd. **Nalivkin.**

Rafinesquina (*Hedstroemina*) *holtedahli* p. 131, *ungula* p. 132, **spp. nov.**, cf. *robusta* p. 133, aff. *robusta* p. 134, all figd. *R.* (*H.* ?) *muensteri* p. 135. Middle Ordovician, Norway. **Spjeldnaes.**

Rafinesquina (*Kjaerina*) *lepta* **sp. nov.** p. 130 figd. Middle Ordovician, Norway. **Spjeldnaes.**

Rafinesquina (*Rafinesquina*) sp. p. 129 figd. **Spjeldnaes.**

Stropheodonta (*Eostropheodonta*) *williamsi* p. 189, *helgoeyensis* p. 191 **spp. nov.** figd. Middle Ordovician, Norway. **Spjeldnaes.**

Stropheodonta stephani, piligera, uralensis p. 69, *interstrialis, asella, dutertrii* p. 70, all figd. **Nalivkin;** of the *taeniolata* group pl 200. **Alberti.**

Strophomena (*Leptaena*) cf. *interstrialis* p. 151 figd. **Firtion.**

Strophomena norvegica p. 142, *hirsuta* p. 145, *steinari* p. 147 **spp. nov.** figd. *keilhavi* p. 146 Middle Ordovician, Norway. **Spjeldnaes.** †cf. *S.vetusta, hecuba* p. 482, *S.* cf. *S. reguliféra* p. 483, all figd. **Ross;** sp. p. 194 figd. **Vokes.**

Strophonella planuscula p. 71, figd. **Nalivkin.**

INCERTAE SEDIS

Isogramma millepunctata p. 37, *paotechowensis* p. 39, both figd. **Volgin (1).**

†ORTHOTETACEA

Derbyia sp. 1, sp. 2, p. 21 figd. Permian, U.S.A. **Cooper (2).**

Derbyoides (? new genus aff. *D.*) p. 493 figd. L^r. Carboniferous Oklahoma. **Elias.**

Geyerella gemmellaroi, p. 198, *rex* p. 200 figd. **Termier & Termier.**

Kiangsiella & relations: geographical distribution discussed. **Stehli.**

Meekella striatocostata p. 493 figd. **Elias;** *striatocostata*, cf. *mexicana, evanescens*, p. 200 figd. **Termier & Termier.**; sp. 1 p. 22 figd. Permian, U.S.A. **Cooper (2).**

Superfamily Orthotetacea discussed p. 42 **Campbell.**

Orthotetes-Derbyia group discussed p. 489 **Elias.**

Orthotets kaskaskiensis p. 196, figd. **Vokes.**

Orthotetes (*Derbyia*) *springerensis* **sp. nov.** *kaskaskiensis* both p. 492 figd. L^r. Carboniferous, Oklahoma. **Elias.**

Schellwienella cf. *hipponyx* p. 200. **Alberti.**

Schuchertella discussed p. 46, *pseudoseptata* **sp. nov.** p. 46 figd. **Campbell;** *umbraculum* p. 67, figd. **Nalivkin.**

Streptorhynchus devonicus, matyricus p. 68, figd. **Nalivkin;** *pelicanensis* **sp. nov.** p. 8 figd. Permian, New Zealand. **Fletcher.**

Werriea **gen. nov.** p. 44 (no family specified), type species *W. australis* **sp. nov.** p. 45 figd. L^r Carboniferous New South Wales. **Campbell.**

Suborder OLDHAMINOIDEA

OLDHAMINACEA

Leptodus cf. *nobilis* p. 205 figd. **Termier & Termier.**

Leptodus ? sp. 1, p. 26 figd. Permian, U.S.A. **Cooper (2).**

Oldhaminids: geographical distribution discussed. **Stehli.**

†RICHTHOFENACEA

Richtofenia sicula pp. 203, 205 figd. **Termier & Termier.**

Richthofenids: geographical distribution discussed. **Stehli.**

†Suborder PRODUCTOIDEA

PRODUCTACEA

Alexenia ? occidentalis p. 44, *subquadrata* p. 45 **spp. nov.** figd. Permian, U.S.A. **Cooper (2).**

Anidanthus minor **sp. nov.** p. 38 figd. Permian, U.S.A. **Cooper (2).**

Antiquatonia reticulata p. 34, *sulcata* p. 35, **spp. nov.** figd. Permian, U.S.A. **Cooper (2);** *khimenkovi* p. 3. **Stepanov.**

Aulosteges baracoodensis p. 36, *reclinis* **sp. nov.** p. 38, *fairbridgei* **sp. nov.** p. 40, *ingens* p. 43, *lyndonensis* p. 46, *spinosus* p. 49, sp. ind p. 51. all figured. Permian, Western Australia. **Coleman.**

Avonia discussed, *A.* (?) *spinosa* **sp. nov.** p. 513, *A.* (?) *snideri* **sp nov.** p. 514, both figd. L^r. Carboniferous Oklahoma. **Elias;** *oregonensis* **sp. nov.** p .31, figd. Permian, U.S.A. **Cooper (2).**

Buxtonia semicircularis p. 495, *incurvatus* p. 496, *suttoni* **sp. nov.** p. 497, all figd. L^r. Carboniferous Oklahoma. **Elias.**

Cancrinella boonensis p. 514 figd. **Elias.**

Chonetipustula petini, ilmenica, p. 78 *lachrymosa, calva* p. 79, all figd. **Nalivkin.**

Chonopectus rossicus p. 80. figd. **Nalivkin.**

Diaphragmus discussed p. 504, *elegans* p. 505, *fasciculatus* p. 508, *fasciculatus girtyi* **var. nov.** p. 509, *fasciculatus bipilus* **var. nov.** p. 511, all figd. L^r. Carboniferous Oklahoma. **Elias.**

Dictyoclostus (? *Antiquatonia*) *callytharrensis* p. 54, *magnus* p. 57, *wadei* p. 59 all figd. Permian, Western Australia. **Coleman.**

Dictyoclostus donetzianus p. 48. U^r. Carboniferous, U.S.S.R., **Volgin;** discussed p. 56 *simplex* **sp. nov.** p. 57, *paradoxus* **sp. nov.** p. 60, *D.* sp. p. 62, all figd. **Campbell;** *mesialis springerensis* **var. nov.** p. 497, *D.* sp. cf. *D. ingrata* p. 499, both figd. L^r. Carboniferous Oklahoma. **Elias;** *moelleri, volgensis, heinskyi, uralicus, gruenewaldti* p. 9. **Stephanov.**

Echinoconchus gradatus p. 62 **Campbell;** *inexpectatus* **sp. nov.** p. 48, figd. Permian, U.S.A. **Cooper (2);** *komischarri* p. 48. **Volgin.**

Echinoconchus sp p. 203, figd. **Ternier & Ternier.**

Etheridgina (?) *muirwoodae* p. 109 figd. **Coleman.**

Gemmellaroia marii p. 203 figd. **Termier & Termier.**

Gemellaroiidae: geographical distribution discussed **Stehli.**

Gigantoproductus latissimus, edelburgensis. **Bogush & Tufrev.**

Horridonia borealis, granulifera p. 8. **Stephanov.**

Kochiproductus transversus **sp. nov.** p. 46, cf. *porrectus* p. 47 both figd. Peruvian, U.S.A. **Cooper (2).**

Krotovia aff. *barenzi* p. 32, *parva* **sp. nov.** p. 33, *pustulata* p. 33, all figd. Permian, U.S.A. **Cooper (2);** *micracantha* p. 61, *senticosa* p. 63 *spinulosa* p. 65, *K.* sp. ind. A. p. 67. all figd. **Coleman.;** *Krotovia* sp. p. 52. **Dickins & Thomas.**

Linoproductus cancriniformis p. 69, *cora* p. 72, *cora foordi* p. 74, *lyoni* p. 76, all figd. **Coleman;** cf. *lutkewitschi* p. 38 figd. **Cooper (2);** *oratus* p. 514 figd. **Elias.**

Marginifera ? *brevisulcata* p. 41, *costellata* p. 42, *multicostellata, profundosulcata* p. 43, **spp. nov.** all figd., Permian, U.S.A. **Cooper (2);** *gratiodentalis* p. 79, figd. **Coleman;** *wabashensis* p. 197, figd. **Vokes;** (? new genus aff. *M.*) p. 499 figd. L^r. Carboniferous Oklahoma. **Elias.**

Muirwoodia transversa **sp. nov.** p. 39 figd. Permian, U.S.A. **Cooper (2).**

Pleurohorridonia ? *elongata* **sp. nov.** p. 37 figd. Permian, U.S.A. **Cooper (2).**

Plicatifera meisteri, praelonga p. 76, *vlangalii, semisbugensis, simplicior* p. 77. *mugodjarica* p. 78 all figd. **Nalivkin.**

Probolionia **gen. nov.** p. 27 type species *P. posteroreticulata* **sp. nov.** p. 30, *elongata* **sp. nov.** p. 29 all figd. Permian, U.S.A. **Cooper (2).**

Proboscidella ? *carcinata* p. 36, figd. **Cooper (2).**

Productella (*Hamlingella*) revised p. 219, *goergesi* p. 219 figd., *piltonensis* p. 221, figd., *Kayseri* p. 223. **Goldring.**

Productella speciosa p. 196 figd. **Vokes;** *subaculeata, mesodevonica* p. 73, *herminae* p. 74 all figd. **Nalivkin.**

Productella (*Steinhagella*) **subgen. nov.** p. 223, type species *heptaena membranacea* Phillips 1841, *steinhagei* p. 224 figd. U^r^. Devonian, Devon. **Goldring**

Productella (*Whidbornella*) revised p. 215, *caperata* p. 216 figd., *caperata* var *radiata* p. 217 figd. **Goldring.**

Productella discussed p. 494, *recensis* **sp. nov.** p. 495 figd. L^r^. Carboniferous, Oklahoma. **Elias.**

Productus (*Antiquatonia*) *neivaensis* **sp. nov.** p. 117 figd. Lower Carboniferous U.S.S.R., **Guseva.**

Productus (*Avonia*) *niger, fallax, karpinskianus* p. 93, figd. **Rotai.**

Productus (*Buxtonia*) *scabriculus* p. 94, figd. **Rotai.**

Productus capaci p. 4. **Stepanov.**

Productus (*Chonetepustula*) *carringtonianus* p. 92, figd. **Rotai.**

Productus (*Dictyoclostus*) *barroisi viascheriensis* p. 151 **var. nov.,** *inflatus* var. *kosvaensis* pl 152 **var. nov.** both figd. Lower Carboniferous, U.S.S.R., **Einor;** *burlingtonensis, deruptus* p. 102, *pugilis, hindi, insculptus* p. 103 all figd. **Rotai;** *postpinguis* **sp. nov.** p. 107 figd., var. *compressa* **var. nov.** p. 110, *rejensis* p. 110 figd. Lower Carboniferous, U.S.S.R. **Guseva.**

Productus (*Echinoconchus*) *punctatus* p. 94, *elegans* p. 95 both figd. **Rotai.**

Productus elegans p. 196, figd. **Vokes.**

Productus (*Gigantella*) *maximus* p. 99, *giganteus, latissimus, semiplanus, edelburgensis* p. 100 all figd. **Rotai.**

Productus (*Gigantoproductus*) *pentagonalis* p. 145, *tschussovensis* p. 147, *supinus, formosus* p. 149 **spp. nov.** *edelburgensis* var. *schaitankaensis* p. 151 **var. nov.** all figd. Lower Carboniferous, U.S.S.R. **Einor.**

Productus (*Linoproductus*) *manturovi* **sp. nov.** p. 119 figd. Lower Carboniferous, U.S.S.R. **Guseva;** *panderi, probus* p. 97, *ovatus, corrugatus* p. 98, *undatus* p. 99 all figd. **Rotai.**

Productus (*Marginifera*) *subcarbonicus* p. 105, figd. **Rotai.**

Productus parvus s. l., *parvus matheri* **var. nov.,** both p. 500, *stehlii* **sp. nov.** p. 501 all figd. L^r^. Carboniferous, Oklahoma. **Elias.**

Productus (*Plicatifera*) *mesolobus* p. 95, *hyperboreus, humerosus* (*Productus sublaevis* Koninck, 1843) p. 96, all figd. **Rotai.**

Productus (*Proboscidella*) *proboscidens* p. 105, figd. **Rotai.**

Productus (*Productus*) *concinnus* p. 104, figd. **Rotai.**

Productus (*Productella*) *subaculeatus* p. 152, figd. **Firtion.**

Productus (*Pugilis*) *einori* p. 112, *üpinensis* p. 114 **spp. nov.** figd. L^r^. Carboniferous, U.S.S.R., **Guseva.**

Productus pugilis, pinguis p. 488, *productus, concinnus* p. 489, **Eogush & Tufrev ;** *riojanus* **sp. nov.** p. 240 figd. Lower Carboniferous, Argentina, **Leanza.**

Productus (*Striatifera*) *striatus* p. 100, figd. **Rotai.**

Productus (*Thomasina*) *margaritaceus* p. 97, figd. **Rotai.**

Pustula pustulosus p. 92, figd. **Rotai.**

Scacchirellidae: geographical distribution discussed, **Stehli.**

Spinulicosta spinulicosta p. 74 figd. **Nalivkin.**

Striatoproductus **gen. nov.** type species *S. sericeus* (Buch) p. 75 figd. Devonian, U.S.S.R., **Nalivkin.**

Strophalosia gerardi p. 10 figd., cf. *jukesi* p. 11. **Fletcher.**

Strophalosia (*Heteralosia*) *etheridgei* p. 120, *irwiniensis* **sp. nov.** p. 122, *kimberleyensis* p. 124, *prendergastae* **sp. nov.** p. 127, *tenuispina* p. 130, all figd. Permian, Western Australia. **Coleman.**

Strophalosia multispinifera p. 114, *prideri* **sp. nov.** p. 116, both figd. Permian, Western Australia. **Coleman.**

Taeniothaerus coolkiliensis p. 89, (?) *fletcheri* p. 91, *irwinensis* p. 93, *miniliensis* p. 96, *teicherti* p. 104, **spp. nov.**, cf. *subquadratus* p. 102. Permian, Western Australia. **Coleman.**

Terrakea fragalis p. 12, *brachythaera* p. 13, both figd. **Fletcher.**

Waagenoconcha imperfecta p. 82, figd. **Coleman;** *irginae, irginaeformis* p. 9. **Stephanov;** (?) *opuntia* p. 200, 203, figd. **Termier & Termier;** *oreliana, murchisoniana* p. 75, *nekhoroschewi* p. 76, all figd. **Nalivkin;** *parvispinosa* **sp. nov.** p. 47 figd. Permian, U.S.A. **Cooper (2).**

†Suborder Chonetoidea

Chonetacea

Chonetes dalmaniana, papilionacea p. 90 figd. **Rotai.**

Chonetes (*Daviesiella*) *comoides* p. 91, figd. **Rotai.**

Chonetes granulifer p. 197, figd. **Vokes;** *jerseyensis* p. 195 figd. **Vokes;** *kingi* **sp. nov.** p. 494 figd. L^r. Carboniferous Oklahoma. **Elias;** *sarcinulatus* p. 200, **Alberti;** *verneuili, plebeja, nana, armata, hardrensis* p. 72, all figd. **Nalivkin;** sp. 1 p. 23 figd., *pygmoideus* **sp. nov.** p. 24 figd. Permian, U.S.A. **Cooper (2).**

Chonetes discussed p. 62, *careyi* p. 63 figd. **Campbell.**

Chonetinella sp. 1 p. 25 figd. Permian, U.S.A. **Cooper (2).**

Eodevonaria dilatata p. 200. **Alberti.**

Paeckelmannia aff. *Chonetes alatus* p. 25 figd. Permian, U.S.A. **Cooper (2).**

Rugosochonetes discussed p. 65, *R.* (?) *werriensis* **sp. nov.** p. 66 figd. **Campbell.**

Suborder Rhynchonelloidea

Rhynchonellacea

†*Basiliola nitida* **sp. nov.** *B.* sp. p. 7 both figd. Mioc.-Plioc. Okinawa, **Cooper (4).**

†*Burmirhynchia japonica* p. 131, *torinosuensis* p. 133 **spp. nov.** "*B*". *capillata* **sp. nov.** p. 134, all figd. U^r. Jurassic, Japan. **Tokuyama.**

†*Camarotoechia congregata parkheadensis* p. 196, figd. **Vokes;** *lentiformis* p. 1 figd. **Sartenaer;** *nympha* p. 85, *alaica, pskovensis, aldoga, strugi* p. 86, *bifera, neapolitana, zadonica, griasica* p. 87, *turanica, omalinsi, deprati* p. 88, all figd. **Nalivkin;** *panderi, pleurodon* p. 106, figd. **Rotai;** *southlandensis* **sp. nov.** p. 13 figd. Permian, New Zealand. **Fletcher;** *triaequalis triaequalis* p. 2 figd. with sections, *C. triaequalis praetriaequalis* **subsp. nov.** p. 20 figd. U^r. Devonian, Belgium. **Sartenaer;** sp. p. 90 figd. **Campbell.**

†*Eatonia peculiaris* p. 196 figd. **Vokes.**

†*Goniorhynchia boueti* p. 26 **Sylvester-Bradley (1).**

†*Gibbirhynchia muirwoodae* p. 151 **Smith (1).**

†*Goniophoria angulata* p. 108, figd. **Rotai;** *carinata* p. 135 figd. **Licharev (1).**

†*Hemithyris psittacea* p. 7 Pliocene, Japan. **Kotoh.**

†*Holochorhynchia* (*err. pro. Holcorhynchia*) *sambosanensis* var. p. 133 figd. **Tokuyama (2).**

†*Hypothyridina cuboides, semilukiana, coronula* p. 96, figd. **Nalivkin.**

†*Hypsiptycha* cf. *H. hydrida, H.* cf. *H. anticostiensis* p. 478 both figd. **Ross.**

†*Monticola collinensis, roemeri, equitans* p. 98, figd. **Nalivkin.**

Ladogia meyendorfi p. 93, figd. **Nalivkin.**

†*Lepidocyclus perlamellosa, capax, gigas* p. 477 all figd. **Ross.**

†*Leiorhynchus kellogi, limitaris, pavlovi* p. 89, *taimyricus, megistanus, ursus, uralicus* p. 90, *baschkiricus* p. 91, all figd. **Nalivkin;** *limitare, globuliforme* p. 196, figd. **Vokes.**

†*Parvirhynchia bella* p. 134 **sp. nov.** figd. U^r^. Jurassic, Japan. **Tokoyama.**

†*Peregrinella multicarinata* p. 19 figd. **Biernat, G.**

†*Plectorhynchella roemeri* p. 566 figd. Upper Devonian, Morocco. **Drot.**

†*Pugnax aciminato* p. 91, *pugnus, voroni* p. 92, all figd. **Nalivkin;** *acuminata* p. 106, figd. **Rotai;** discussed p. 89, *Minutus* **sp. nov.** p. 90 figd. **Campbell.**

†*Pugnoides triaequalis* p. 92 figd. **Nalivkin.**

†*Sakawairhynchia* **gen. nov.** p. 126, type species *S. tokomboensis* **sp. nov.** p. 127, *katayamai* **sp. nov.** p. 129, *katayamai* var. p. 130, all figd. U^r^. Triassic Japan. **Tokuyama (2).**

†*Septalaria semilaevis, formosa* p. 97, figd. **Nalivkin.**

†*Tetracamera* discussed p. 88, *T.* cf. *T. subtrigona* p. 89 figd. **Campbell.**

†*Tetrarhynchia subconcinna* p. 254 **Ager (2).**

Reflexia reflexa p. 117, figd. **Rotai.**

†*Rhynchonella* (*Austriella*) cf. nux, *intercurrens* p. 162, cf. *lingulina* p. 163 **Mahel.**

†'*Rhynchonella*' *bidens triplicata* p. 11; *subvariabilis* p. 13 **Ager.**

†*Rhynchonella contracta* p. 358, figd. **Mutihac;** *corallina* var. *neocomiensis, R. gibbsiana* var. *bedouliensis*, p. 39, figd. *lata, lata* var. *minor* p. 40, figd., *limbata* var. *undulata, moutoniana* p. 41, figd., *multiformis* var. *ardescica* p. 42 figd; *fissicostata* p. 157, sp. ind. aff. *fissicostata* p. 158, *spreta, subrimosa* **sp. nov.** p. 160, all figd. Trias, Czechoslovakia. **Mahel.**

†"*Rhynchonella*" sp. cfr. *haradai* p. 129, sp. aff. *bouchardi* p. 130, both figd. **Tokuyama.**

†*Rhynchonella* (*Hypothyridina*) *cuboides* p. 289, figd. **Hoth.**

Rhynchonella loxia p. 1 figd., *rouilleri* p. 12 figd., *malbosi, lewinski* p. 12; *aptycha canard, aigle, portlandica* p. 13 **Ager.**

†"*Rhynchonella*" *maorica, nuggetensis, Zealandica*, p. 32, figd. Middle Triassic, New Zealand. **Marwick.**

†*Rhynchonella multiformis* p. 135 figd. **Haller;** *plicatlis, plicatilis* var. *octoplicata* p. 43 figd., *popchadzei* **sp. nov.** p. 44 figd. Cretaceous, U.S.S.R. **Aliev.**

†"*Rhynchonella*" *noichiensis* p. 130, *subflabellata* p. 131, *hirabarensis* p. 131, *asoensis* p. 132, *kochigataniensis* p. 134, *nakajimensis* p. 135, all **spp. nov.**, "*R*". **sp. nov.** indet. p. 136 figd. U^r^. Triassic Japan, **Tokuyama (2).**

†*Rhynchonell*[*a*] *subcordiformis* p. 153 figd. **Firtion.**

†*Rhynchonella uhi* p. 178, *plicatissima* p. 179 both figd. **Cuzzi;** *valangiensis, multiformis* var. *ardescica*, var. cf. *subardescica*, var. aff. *castellanensis*, p. 107, all figd., var. *contractoides, R.* cf. *lata, R.* aff. *lata* figd. p. 108, *R. lata* var. *minor, R. depressa* figd. *lineolata* p. 109. *R* sp. p. 110 figd. **Popkhadze.**

†*Rhynchonellina juvavica* p. 165 figd. **Mahel.**

†*Rhynchonelloidea lineata* p. 251 **Ager (3).**

†*Rhynchopora lobjaensis* p. 4, *variabilis, nikilini, geinitziana* p. 5. **Stepanov;** *magna* **sp. nov.** p. 54, figd. Permian, U.S.A. **Cooper (2).**

†*Rhynchotrema iowense* p. 476, *R.* cf. *R. plicata* p. 477, both figd. **Ross.**

†*Rhytirhynchia* **gen. nov.** type species *R. hataiana* **sp. nov.** p. 8 figd. Plioc.-Pleist. Okinawa **Cooper (4).**

†*Tegulorhynchia döderleini* p. 6 figd. **Cooper (4).**

†*Uncinulus* aff. *orbinianus* p. 200. **Alberti;** *princeps, Parallelepipedus* p. 94, *subcordiformis, implexus, angularis*, [*ai* Nalivkin in litt.], p. 95 all figd. **Nalivkin;** sp. p. 208 figd. **Termier & Termier**

†*Wellerella multiplicata* **sp. nov.** p. 49, figd. Permian, U.S.A. **Cooper (2).**

†*Welleria subtrigona* p. 107, figd. **Rotai.**

†*Yanischewskiella angulata* p. 138, figd. **Licharev (1).**

†*Zilimia* **gen. nov.** type species *Rhynchonella polinica* Gurich, 1896, p. 93 figd. Devonian, U.S.S.R. **Nalivkin.**

†Stenocismatacea

Camarophoria plicata, kutorgae isorhyncha p. 7. **Stepanov;** *rhomboidea* p. 108, *donica* p. 109 both figd. **Rotai.**

Camerophoria sp. p. 208 figd. **Termier & Termier.**

Stenoscisma mutabile oregonense **subsp. nov.** p. 50, *americanum* p. 52, *biplicatoideum* p. 53 **spp. nov.** cf. *plicatum* p. 54 all figd. Permian, U.S.A. **Cooper (2).**

†Suborder Atrypoidea

Atrypacea

Anatrypa micans, heckeri p. 102, *kadzielniae* p. 103, figd. **Nalivkin.**

Atrypa comata, granulifera, flabellata p. 99, *desquamata, zonata, magnitica, alticola* p. 100, *tenuisulcata, velikaya, uralica, bifidaeformis* p. 101 *tubaecostata* p. 102. **Nalivkin;** *reticularis* p. 200 **Alberti;** *reticularis, aspera* p. 154 both figd. **Firtion.**

Carinatina arimaspus, paradoxa p. 103, *plana* p. 104, figd. **Nalivkin.**

Catazyga anticostiensis p. 478, *C.* sp. p. 479, both figd. **Ross.**

Coelospira acutiplicata p. 196 figd. **Vokes.**

Karpinskia conjugular p. 104, figd. **Nalivkin.**

Leptocoelia flabellites p. 105, figd. **Nalivkin.**

Protozeuga anticostiana p. 480 **Ross.**

Zygospira cf. *Z. resupinata, Z.* cf. *Z. aequivalvis,* p. 479, both figd. **Ross.**

†Suborder Spiriferoidea

Spiriferacea

Acrospirifer murchisoni p. 195 figd. **Vokes;** *primaevus, frequens, cheehiel* p. 109, figd. **Nalivkin.**

Adolfia deflexa p. 111, *ibergensis, aspera, ziczac* p. 122, figd. **Nalivkin.**

Ambocoelia umbonata p. 26, figd. **Nalivkin;** *rogeri* **sp. nov.** p. 565, figd. Middle Devonian, Morocco. **Drot.**

Austrospirifer **gen. nov.** p. 58, type species *A. variabilis* **sp. nov.** p. 59, both figd. U^{r}. Devonian Western Australia. **Glenister.**

Australocoelia peruviana nom. nov. pro. *Leptocoelia flavbellites* auct. non. Conrad. pl 29. **Leanza (1).**

Brachythyris pseudoralis **sp. nov.** p. 76 figd. **Campbell;** *sulcifera* p. 124, figd. **Nalivkin.**

Costipirifer arenosus p. 195 figd. **Vokes.**

Crurithyris planoconvexa p. 197, figd. **Vokes;** sp. 1 p. 55 figd. **Cooper (2);** sp. p. 210 figd. **Termier & Termier.**

Cyrtospirifer schelonicus, disjunctus, p. 113, *calcaratus, archiaci, brodi,* p. 114, *postarchiaci, lebedianicus, tenticulum, markovskii* p. 115, *murchisonianus, jerevnejewi, semisburgensis* p. 116; *sulcifer, aquilinus, ussofi, pamiricus* p. 117, all figd. **Nalivkin;** *minilyaensis* p. 63, *australis* p. 64, *gneudnaensis* p. 66 *brevicardinis* p. 67, **spp. nov.** all figd. U^{r}. Devonian, Western Australia. **Glenister;** *chemungensis* p. 18, figd. *altiplicus* p. 20, *angusticardinalis* p. 21, *preshoensis* p. 22, **spp. nov.** figd., *inermis* p. 24, *sulcifer* p. 26, figd; *vandermarkensis* p. 27, *hornellensis* p. 28, *nucalis* p. 29, *tionesta* p. 31, *spicatus* p. 32, *corriensis,* p. 33 *warrensis* p. 35, *oleanensis* p. 36, *leboeufensis* p. 37; *lobatinnusculus* **sp. nov.** p. 38, figd. U^{r}. Devonian—L^{r}. Mississippian Pennsylvania. **Greiner;** *verneuili* p. 351 figd. **Tonnard;** aff. *sibiricus* p. 55 figd. **Vasilyeva & Poyarkov.**

Delthyris, genus discussed p. 311, **Boucot.**

Delthyris perlamellosa p. 159, figd. **Vokes;** *subtiro, saricosta* p. 107, figd. **Nalivkin.**

Ectochoristites **gen. nov.** p. 71, family Spiriferidae, subfamily Spiriferinae, type species *E. wattsi* **sp. nov.** p. 73 figd. L^{r}. Carboniferous New South Wales **Campbell.**

Elytha fimbriata p. 121, *undifera* p. 122, all figd. **Nalivkin.**

Eoreticularia curvata p. 122, *maureri, Pseudopachyrincha pachyrincha, koltubanica* p. 123, all figd. **Nalivkin.**

Eospirifer irbitensis, weberi, vetulus p. 106, figd. **Nalivkin;** *macropleurus* p. 195, figd. **Vokes.**

Eospirifer ? sp. p. 200, **Alberti.**

Euryspirifer audaculus, ali p. 108, both figd. **Nalivkin.**

Gürichella prumiensis p. 12, *pseudomultifidia* p. 15, *biverrucosa* p. 24, *deflexa* p. 38, *rarispinosa* p. 43, all figd. U^{r}. Devonian **Vandercammen.**

Hedeina **gen. nov.** p. 323, figd., type *Anomia crispa* Linnaeus 1758. —*H. crispa* p. 324 figd. Silurian. **Boucot.**

Howellella genus discussed p. 315. **Boucot.**

Howellella crispa p. 194 figd. **Vokes.**

[*I*]*lmenia subumbona* p. 125, figd. **Nalivkin.**

Indospirifer pseudowilliamsi p. 113, figd. **Nalivkin.**

Kozlowskiellinae **subfam. nov.** p. 317, for *Kozlowskiella, Megakozlowskiella,* and *Hedeina* **gen. nov. Boucot.**

Kozlowskiella **gen. nov.** p. 318, typ. *K. strawsi* **sp. nov.** p. 320, both figd. Middle Silurian — L^{r}. Devonian. **Boucot.**

Kozlowskiella (*Megakozlowskiella*) **subgen. nov.** p. 322, figd. type, *Spirifer perlamellosus* Hall 1857. M. Silurian — L^{r}. Devonian. **Boucot.**

Kozlowskiella (*Kozlowspiella*) **subgen. nov.** type (*K.*) *strawi* **sp. nov.** p. 320 figd. M. Silurian. **Boucot.**

Lamellispirifer muralis, novosibiricus, posterus p. 110, *mucronatus* p. 111 figd. **Nalivkin.**

Mentzelia kawhiana figd., cf. *ampla* p. 34. **Marwick.**

Mentzeliopsis spinosa figd., *horrida,* p. 35. **Marwick.**

Mucrospirifer alpensis, prolificus p. 85, *multiplicatus* p. 86, *attenuatus, profundus* p. 87, *grabaui* **nom. nov.** for *S. profundus* mut. *intermedia* Grabau. p. 88, *grabaui* var. A., *latus* p. 89, Middle Devonian, Michigan, U.S.A. **Stumm;** *mucronatus* p. 196 figd. **Vokes.**

Neospirifer sp. 1 p. 58 **Cooper (2).**

Neospirifer sp. ind. p. 52. **Dickins & Thomas.**

Paulonia talassica **sp. nov.** p. 58 figd. Devonian, Tien-Shan U.S.S.R. **Vasilyeva & Poyarkov.**

Pseudomartinia berthiaumei **sp. nov.** p. 58, figd., aff. *semiglobosa* p. 59. Permian, U.S.A. **Cooper (2).**

Pseudosyrinx sp. nov. p. 52. Permian, Western Australia. **Dickins & Thomas.**

Pyramidalia **gen. nov.** type species *Spirifer simplex* Phillips, 1841, p. 124, *pyramidalis* p. 125, figd. **Nalivkin.**

Quadrifarius robustus p. 108, figd. **Nalivkin.**

Reticularia pseudolineata, p. 114 *beschewiana* p. 115, figd. **Rotai;** *inaequilateralis,* cf. *affinis* p. 208, *affinis, R.* sp. p. 210, figd. **Termier & Termier.**

Rhynchospiriferinae **subfam. nov.** for *Rhynchospirifer* **gen. nov.** p. 51, type species *R. halleri* **sp. nov.** p. 52 figd. Middle Devonian, Germany. **Paulus.**

Rhynchospirifer ? *auburgensis* **sp. nov.** p. 63, figd. Middle Devonian, Germany. **Paulus.**

Rhynchospirifer hians p. 73 **Struve;** *leyensis,* p. 55, *caldinacius* p. 56, *ahbachensis* p. 58 **spp. nov.,** *hians* p. 59, *sublimis* p. 60; *steinmanni* p. 61, *stringorhynchus* p. 64, all figd. Middle Devonian, Germany. **Paulus.**

Spinocyrtia granulosa p. 196, figd. **Vokes;** *granulosa* p. 6, figd., *mourante* p. 10, *parvigranulata* p. 12, *tumidigranulata* p. 13, *carinata* p. 15 *ravenswoodensis* p. 17. **spp. nov.** all figd. Middle Devonian, Canada. **Ehlers & Wright (1).**

Spinocyrtia sp. p. 200. **Alberti.**

Spirifer (*Acrospirifer*) *mosellanus steiningeri*, *mosellanus* subsp. indet. *mosellanus dahmeri*, *intermedius vetustus*, p. 200. **Alberti.**

Spirifer (*Brachithyrina* ?) *triangularis* p. 113, figd. **Rotai.**

Spirifer (*cyrtospirifer*) *julii* p. 109, figd. **Rotai.**

Spirifer (*Eudoxina*) *mediuz* p. 110, figd. **Rotai.**

Spirifer fluctuosus **sp. nov.** p. 68, figd. L^{r}. Carboniferous, Western Australia. **Glenister;** *gwinneri* p. 145 **Delépine;** *huroniensis* p. 176 figd. **Ehlers & Wright;** *keokuk* p. 197, figd. **Vokes;** *keyselingi* p. 130 figd. **Licharev.**

Spirifer (*Martinia*) cf. *glaber*, p. 14 figd. **Fletcher.**

Spirifer opimus p. 515, *casteri* **sp. nov.** p. 517, both figd. L^{r}. Carboniferous, Oklahoma, **Elias.**

Spirifer (*Pseudosyrinx* ?) *plenus* p. 113, figd. **Rotai.**

Spirifer sp. p. 212 figd. **Termier & Termier;** aff. *tasmaniensis* p. 15 figd. **Fletcher;** *tornacensis* p. 110, *cinctus*, *attenuatus* p. 111, *duplicicostus*, *trigonalis*, *bisulcatus*, p. 112, *lutugini* p. 113 all figd. **Rotai;** *trigonalis* var. *planicostata* p. 152 **var. nov.** figd. Lower Carboniferous, U.S.S.R. **Einor.**

Spiriferella draschei p. 56, *parva* **sp. nov.** p. 57, figd. Permian, U.S.A. **Cooper (2).**

Squamularia lineata p. 115, figd. **Rotai;** *rostrata* p. 59, figd. **Cooper (2).**

Strophopleura discussed p. 78, *anterosa* **sp. nov.** p. 79 figd. **Campbell.**

Theodossia svinordensis, *superba* p. 119, *schülkei*, *anossofi*, *katavenos*, *tanaica* p. 120, *evlanensis*, *livnensis* p. 121, all figd. **Nalivkin.**

Uchtospirifer **gen. nov.** lyashenko, 1950 in. litt. type species *U. nalivkini* p. 886 figd. **Lyashenko.**

Uchtospirifer nalivkini **sp. nov.** Lyashenko 1950 (in litt.) p. 886 figd. Middle and U^{r}. Devonian, U.S.S.R. **Lyashenko.**

Unispirifer **gen. nov.** p. 67, family Spiriferidae, subfamily Spiriferinae, type species *Spirifer striatoconvolutus* Benson & Dun (1920), p. 68 figd. L^{r}. Carboniferous New South Wales. **Campbell.**

ATHYRACEA

Athyris (*Actinoconchus* ?) *variabilis* p. 116, figd. **Rotai.**

Athyris angelica, *bayeti*, *cora*, p. 128, *concentrica*, *tau*, *sulcifera* p. 129 figd. **Nalivkin.**

Athyris (*Cleiothyridina*) *pectinata* p. 116, figd. **Rotai.**

Athyris (*Composita*) *ambigua* p. 116, figd. **Rotai.**

Athyris kaihikuana p. 43 figd., *wreyi* figd., *manzaviniodes* p. 44. **Marwick.**

Anathyris monzevi, *helmerseni*, *monstrum*, *phalaena* p. 130, figd. **Nalivkin.**

Cleiothyridina attenuata **sp. nov.** p. 60, *gerardi* p. 61 figd. Permian, U.S.A. **Cooper (2).**

Cleiothyridina sp. p. 212 figd. **Termier & Termier.**

Composita rotunda p. 520, *wasatchensis* p. 522, both figd. **Elias;** *subquadrata* p. 197, figd. **Vokes.**

Composita sp. 1 p. 61. **Cooper (2).**

Eumetria genus discussed p. 522, *vera* p. 523, *verneuiliana* p. 524, both figd., *matheri* **sp. nov.** p. 524 L^{r}. Carboniferous Oklahoma **Elias.**

Eumetria discussed p. 84, *E.* (?) *mona* **sp. nov.** p. 85 figd. **Campbell.**

Eumetria (*Acambona* ?) *deltoides* **sp. nov.** p. 525 figd. L^{r}. Carboniferous Oklahoma. **Elias.**

Hustedia sp. 1 p. 63, figd. **Cooper (2).**

Meristina praenuntia p. 195 figd. **Vokes,**

Retzia longirostris p. 155 figd. **Firtion;** *reticulata, morganiana* p. 43 figd. **Marwick;** *reticulata* p. 43 In legend pl. 1 fig. 21, for *lectotype* read *syntype*. **Marwick (1);** *schwageri fastosa, superbescens* p. 171 figd. **Mahel;** *ulentica, lopatini* p. 127, figd. **Nalivkin.**

Spirigera eurycolpos p. 169, *oxycolpos* p. 170 figd. **Mahel.**

Spirigera (*Diplospirella*) spec. indet ex. grupae *S. wissmani* p. 170 figd. **Mahel.**

†*Uncites gryphus* p. 127, figd. **Nalkvkin.**

Whitfieldella marylandica p. 195 figd. **Vokes.**

PUNCTOSPRIRACEA

Acanthospirina genus discussed p. 519, *A.* sp. A. p. 520 figd. **Elias.**

Asyrinxia **gen. nov.** p. 80, family Spiriferinidae, subfamily Syringothyrinae, type species *Spirifera lata* McCoy (1847) p. 81 figd. L^{r}. Carboniferous New South Wales. **Campbell.**

Clavigera bisulcata p. 45 figd, *tumida, cuneiformis* p. 46 figd. **Marwick;** *demarlü, heteroclyta* p. 126, figd. **Nalivkin.**

Cyrtina austriaca, suessü p. 168 figd. **Mahel.**

Cyrtiopsis graciosa p. 1 figd. **Sartenaer (2);** *rjausakensis, zilimensis cuneatus* p. 118, figd. **Nalivkin.**

Martinia (?) *hemisphaerica* **sp. nov.** p. 153 figd. Lower Carboniferous, U.S.S.R. **Einor;** *glabra* p. 114, figd. **Rotai.**

Punctospirifer kentuckeyensis, transversa, both p. 518 figd. **Elias;** *plicatosulcatus* **sp. nov.** p. 69, figd. Lower Carboniferous, Western Australia. **Glenister;** genus discussed p. 99, *triadicus* **sp. nov.** p. 100, *triadicus kashiwaiensis* **subsp. nov.** p. 101, both figd. U^{r}. Triassic Japan. **Tokuyama (1).**

Punctospirifer sp. p. 212 figd. **Termier & Termier.**

Punctospirifer sp. 1, p. 63, figd. *P.* sp. 2, p. 63. **Cooper (2).**

Punctospirifer sp. p. 80 **Campbell.**

Septosyringothyris aff. *S. keideli* p. 99 figd. **Amos.**

Spiriferellina cf. *papilionata* p. 52. **Dickins & Thomas;** *pauciplicata* **sp. nov.** p. 62, figd. Permian, U.S.A. **Cooper (2).**

Spiriferina emmrichi p. 165, *emmrichi acerrina* figd, *emmrichi subtilicostata* p. 166, *praecursor* p. 167. **Mahel ;** (*Psioidea*) *australis* p. 40. [additional loclaity: legend of pl. 2 fig. 18 should be for fig. 7]. **Marwick (1);** *conjuncta* p. 39 figd., *nelsonensis, australis* p. 40 figd. **Marwick.**

Spiriferina kaihikuana, carolinae, trechmanni p. 36 figd., *fragilis, otamitensis, parki* p. 37, figd., *novoseelandica* p. 38 figd. **Marwick.**

Spiriferina (*Rastelligera*) *elongata* p. 41 figd., *acutissima, gypaetus* p. 42 figd. **Marwick.**

Spiriferinoides **gen. nov.** p. 101, type species *S. sakawanus* **sp. nov.** p. 102, *yeharai* **sp. nov.** p. 104, *nasai* **sp. nov.** p. 105, all figd. U^{r}. Triassic Japan. **Tokuyama (1).**

Syringothyris feruglioi **sp. nov.** p. 103 figd. L^{r}. Carboniferous Argentina, *cuspidata* p. 102 figd., aff. *S. cuspidata* p. 101 figd. **Amos;** *keideli* p. 242, *S. keideli* var. *erina* **var. nov.** p. 243 both figd. L^{r}. Carboniferous, Argentina, **Leanza;** *spissus* **sp. nov.** p. 70, figd. Lower Carboniferous, Western Australia. **Glenister;** *typus* p. 114, figd. **Rotai.**

Suborder TEREBRATULOIDEA

TEREBRATULACEA

†*Balanoconcha* **gen. nov.** p. 86, family Dielasmatidae, type species *B. elliptica* **sp. nov.** p. 86 figd. L^{r}. Carboniferous New South Wales. **Campbell.**

†*Coenthyris* sp. U^{r}. Trias, New Zealand. **Marwick.**

†*Cryptacanthia prolifica* **sp. nov.** p. 2 figd., *compacta* p. 13 figd. Pennsylvanian, U.S.A. **Cooper (5).**

†*Cryptonella planirostra, uralica* p. 132, figd. **Nalivkin.**

†*Dielasma* ? *truncatum* p. 66, *D. brevicostatum* p. 66, *rectimarginatum* p. 67, **spp. nov.** all figd. Permian, U.S.A. **Cooper (2).**

†*Dielasma vesiculare* p. 117, figd. **Rotai;** *zealandica* figd., cf. *himalayana* p. 33 **Marwick.**

†*Gryphus hanzawai, stearnsi* p. 11 both figd., *G.* sp. p. 12 **Cooper (4).**

Jisuina & relations: geographical distribution discussed. **Stehli.**

†*Lobothyris punctata clevelandensis* **subsp. nov.** p. 2, figd. L^r^. Jurassic Yorkshire & Oxfordshire, **Ager (1).**

†*Rostrantesis exilis* p. 213 figd. **Termier & Termier;** *merriami*, p. 64, *sulcatum* p. 65, **spp. nov.** figd, Permian, U.S.A. **Cooper (2).**

†*Terebratula bamaensiformis* p. 128, *lambertiformis* p. 129, *pseudobicaniculata, suboppeli*, p. 130 **spp. nov.** all figd. Upper Jurassic, Egypt **Farag;** *biplicata*, var. *dutempleana* p. 110 figd., *sella*, var. *upwarensis* p. 111 figd., *praelonga*, cf. *praelonga* p. 111 *semiglobosa*, var. *albensis* p. 112 figd. *elongata* p. 112. **Popkhadze;** *biplicata* p. 44 figd. **Aliev;** *globata* p. 108, *phillipsii* p. 109, *perovalis* p. 110, *linguifera* p. 111, *cheltensis* p. 112, cf. *carinata* p. 112, all figd. Jurassic, Yugoslavia. **Danilova, Antonijevic & Trajkovic;** *hungarica* p. 172, *pyriformis* p. 173 figd. **Mahel.**

†" *Terebratula* " cf. *hungarica, pachydentata* p. 33. **Marwick.**

†*Terebratula* (*Lophrothysis*) cf. *lophus* U^r^. Lias, Egypt. **Farag;** *punctata* var. *andleri* p. 171, *renevieri* p. 172 both figd. **Cuzzi.**

†"*Terebratula*" *reversa* **sp. nov.** p. 4 figd. L^r^. Jurassic Dorsal, serial sections, **Ager (1).**

†*Terebratula* cf. *scillae, sinuosa.* **Malaroda;** *tamarindus* p. 135, *moutoniana, sella* p. 135 figd. **Haller.**

†" *Terebratula* " *variabilis* p. 13, **Ager.**

†" *Terebratula* " sp. p. 108 figd. **MacNeil.**

†*Terebratulina japonica* p. 7 Pliocene, Japan. **Kotoh;** *japonica* p. 9, *perplexa* **sp. nov.** p. 9 figd., *subcarinata* **sp. nov.** *I.* sp. 1. p. 10 both figd., *T.* indet. p. 11 Neogene-Pleist. Okinawa **Cooper (4);** aff. *T. retusa* p. 107 figd. **MacNeil.**

CENTRONELLACEA

†*Chascothyris salairica* p. 134, figd. **Nalivkin.**

†*Denckmanella damesi* p. 134, figd. **Nalivkin.**

†*Elmaria glabra, plicata* p. 133, figd. **Nalivkin.**

†*Enantiosphen vicaryi* p. 132, *beyrichi* p. 133, figd. **Nalivkin.**

†*Rensselaeria marylandica* p. 195, figd. **Vokes.**

†*Stringocephalus burtini* p. 131, figd. **Nalivkin.;** *burtini* p. 156 figd. **Firtion.**

Suborder TEREBRATELLOIDEA

TEREBRATELLACEA

†*Campages nipponsis* p. 12 figd. **Cooper (4).**

†*Coptothysis adamsi* p. 7 Pliocene, Japan. **Kotoh.**

†*Dallinella obsoleta* p. 334 figd. **Elliott.**

†*Dallina raphaelis* p. 15 figd. **Cooper, (4).**

†*Frenulina sanguinolenta* p. 12 figd. **Cooper (4).**

†*Gemmarcula aurca* p. 334 figd. **Elliott,**

†*Jolonica hedleyi, elliptica* **sp. nov.** p. 13, *ryukyuensis macneili* **sp. nov.** p. 14, all figd. Mioc.-Plioc. Okinawa. **Cooper (4).**

†*Kingena lima* p. 113. **Popkhadze.**

†*Kikaithyris hanzawai* p. 17 figd. **Cooper (4).**

†*Laqueus quadratus, elongatus* **sp. nov.** p. 15, *L.* sp. 1 p. 16, all figd. **Cooper (4);** *rubellus* p. 7 Pliocene, Japan. **Kotoh.**

†*Magas* cf. *geinitzi* p. 113 figd. **Popkhadze.**

†*Ornithella digona* p. 26 **Sylvester-Bradley (1).**

†*Pictothyris picta* p. 16 figd. **Cooper (4).**

†*Terebratalia coreanica, gouldi,* Pliocene, Japan, **Kotoh.**

Superfam Terebrastellacea, origin of superfamily discussed p. 259. **Elliott (1).**

Waldheimia (*Aulacothyris*) *conspicua, frontalis,* aff. *kühni* **sp. nov.** p. 174 figd., cf. *ramsaueri, reflexa* p. 176, *rüdti, rupicola* p. 177 figd. Trias, Czechoslovakia **Mahel.**

Waldheimia (*Zeilleria*) *austriaca* p. 177, *elliptica* p. 178. **Mahel.**

†*Zeilleria* genus discussed p. 11, *elliotti* **sp. nov.** p. 8 figd. L^{r}. Jurassic Dorset, serial sections & reconstruction of brachial valve, **Ager (1);** *elliotti* p. 335 **Elliott;** *florella* p. 60 U^{r}. Lias, Egypt. **Farag;** *ovatissimaeformis* p. 173, *sarthacensis* p. 175, *perforata* p. 176, all figd. **Cuzzi;** *pseudojurensis* p. 45 figd., *tamarindus* p. 46 figd. **Aliev;** *tamarindus* p. 112, Z. (**sp. nov.** ?) p. 113 figd. **Popkhadze.**